

Response to Restriction Requirement and Amendment
USSN 10/734,049

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-36. (Canceled)

Claim 37. (New) An isolated polypeptide consisting of the amino acid sequence of SEQ ID NO: 267 or a peptide fragment thereof, wherein said fragment is selected from the group consisting of: SEQ ID NO: 185, SEQ ID NO: 186, SEQ ID NO: 187, and SEQ ID NO: 188.

Claim 38. (New) The isolated polypeptide or peptide fragment of claim 37, wherein said polypeptide or peptide fragment is recognized by a cytotoxic T lymphocyte and/or induces a cytotoxic T lymphocyte.

Claim 39. (New) The isolated polypeptide or peptide fragment of claim 37, wherein said polypeptide or peptide fragment is recognized by a cytotoxic T lymphocyte in an HLA-A2 restricted manner, and/or induces a cytotoxic T lymphocyte in an HLA-A2-restricted manner.

40. (New) A pharmaceutical composition comprising at least one polypeptide or peptide fragment of claim 37 and a pharmaceutically acceptable carrier.

Response to Restriction Requirement and Amendment
USSN 10/734,049

41. (New) A cancer vaccine comprising an immunoprotective amount of at least one polypeptide or peptide fragment of claim 37 and a pharmaceutically acceptable carrier.

42. (New) The cancer vaccine of claim 41, wherein said cancer vaccine is effective for one or more cancers selected from the group consisting of colon cancer, esophageal cancer, oral squamous cell cancer, renal cancer, pulmonary cancer, gynecological cancer, and prostate cancer.

43. (New/Withdrawn) A method for inducing a cytotoxic T lymphocyte, wherein the method comprises contacting peripheral blood mononuclear cells with at least one polypeptide or peptide fragment of claim 37.

44. (New/Withdrawn) An isolated polynucleotide encoding the polypeptide or peptide fragment of claim 37, or a complementary strand thereof.

45. (New/Withdrawn) A recombinant expression vector comprising the polynucleotide of claim 44.

46. (New/Withdrawn) A transformant harboring the recombinant expression vector of claim 45.

Response to Restriction Requirement and Amendment
USSN 10/734,049

47. (New/Withdrawn) A method for producing the polypeptide or peptide fragment of claim 37, wherein the method comprises culturing a transformant harboring a recombinant expression vector, wherein said recombinant expression vector allows for expression of said polypeptide or peptide fragment.

48. (New/Withdrawn) An antibody that immunologically recognizes the polypeptide or peptide fragment of claim 37.

49. (New/Withdrawn) A method for screening for a compound that enhances recognition of the polypeptide or peptide fragment of claim 37 by an HLA-A2 restricted cytotoxic T lymphocyte, wherein said method comprises contacting said polypeptide or peptide fragment with a test compound, and determining whether said test compound enhances said recognition by measuring IFN- γ production from said cytotoxic T lymphocyte.

50. (New/Withdrawn) A method for screening for a compound that enhances recognition of said polypeptide or peptide fragment of claim 37 by an HLA-A2-restricted cytotoxic T lymphocyte, wherein said method comprises:

contacting HLA-A2+ cells that have been pulsed with a peptide fragment selected from the group consisting of SEQ ID NO: 185, SEQ ID NO: 186, SEQ ID NO: 187, and SEQ ID NO: 188, with said cytotoxic T lymphocyte, and in the presence and absence of a test compound, wherein said cytotoxic T lymphocyte recognizes a complex of the peptide with the HLA-A2 molecule;

Response to Restriction Requirement and Amendment
USSN 10/734,049

and determining whether said compound enhances said recognition by measuring IFN- γ production from said cytotoxic T lymphocyte.

51. (New/Withdrawn) A method for screening for a compound that enhances recognition of the polypeptide or peptide fragment of claim 37 by an HLA-A2-restricted cytotoxic T lymphocyte, wherein said method comprises:

contacting HLA-A2+ cells, said cells harboring a polynucleotide that allows for expression of said polypeptide or peptide fragment, with said cytotoxic T lymphocyte, and in the presence and absence of a test compound, wherein said cytotoxic T lymphocyte recognizes a complex of a peptide fragment selected from the group consisting of SEQ ID NO: 185, SEQ ID NO: 186, SEQ ID NO: 187, and SEQ ID NO: 188, with the HLA-A2 molecule; and

determining whether said compound enhances said recognition by measuring IFN- γ production from said cytotoxic T lymphocyte.

52. (New/Withdrawn) A method for treating cancer comprising administering to a patient in need of treatment the cancer vaccine of claim 41.

53. (New/Withdrawn) The method of claim 52, wherein said cancer vaccine is administered in an amount sufficient to induce HLA-A2-restricted cytotoxic T lymphocytes in said patient to thereby lyse cancer cells.

Response to Restriction Requirement and Amendment
USSN 10/734,049

54. (New/Withdrawn) A method for treating a cancer patient comprising: treating peripheral blood mononuclear cells isolated from said patient with the pharmaceutical composition of claim 40, and administering the treated peripheral blood mononuclear cells to said patient.

55. (New/Withdrawn) A method for treating a cancer patient comprising: treating peripheral blood mononuclear cells isolated from said patient with the pharmaceutical composition of claim 40 in an amount sufficient to induce HLA-A2-restricted cytotoxic T lymphocytes in a manner sufficient to lyse cancer cells in said patient, and administering the treated peripheral blood mononuclear cells to said patient.

56. (New/Withdrawn) A reagent kit comprising at least one member selected from the group consisting of: a polypeptide or peptide fragment of claim 37, an antibody that immunologically recognizes said polypeptide or peptide fragment, a polynucleotide encoding said polypeptide or peptide fragment or complementary strand thereof, a recombinant expression vector that expresses said polypeptide or peptide fragment, and a transformant harboring said expression vector, and
a buffered solution.